



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,664	12/28/2001	Mark Muhlestein	112056-0022	4613

24267 7590 04/10/2007
CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

NGUYEN, THAN VINH

ART UNIT	PAPER NUMBER
----------	--------------

2187

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/035,664

Applicant(s)

MUHLESTEIN ET AL.

Examiner

Than Nguyen

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-11, 13-17, 20, 23 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11, 13-17, 20, 23 and 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a response to the response, filed 1/30/07.
2. Claims 6-11, 13-17, 20,23, and 26-30 are pending.

Response to Amendment/Arguments

3. Applicant's arguments filed 1/30/07 have been fully considered but they are not persuasive. Applicant argues that the prior art does not teach "partitioning resources of the server to establish an instance of each virtual server by allocating units of storage and network addresses of network interfaces of the server to each instance of the virtual server ... enabling controlled access to the resources using logical boundary checks and security interpretations of those resources within the server by comparing configuration information of a unit of storage requested by a particular vserver with the resources allocated to that particular server". The Examiner disagrees. The claimed invention requires establishing a virtual server by allocating storage resources and address to the virtual server. Wesinger teaches establishing virtual servers by establishing virtual hosts (multi-homed servers VH1-VHn; 1/9,12; 2/23,26); each virtual host has separate resources (as defined by the Web server and configuration files, each has own assigned storage resources and address; 1/9,12; 2/23,26). Each server has an assigned network address because each acts as a distinct and independent server (1/12; 2/24,26). Access to the resources of the (physical) server requires the request to pass access rules set up by the configuration file of each virtual host/server, which checks for access privilege to areas assigned to that virtual server, which is a part of the physical web server (3/39-41). All access rules must be satisfied before access can be gained to access the resources of the host.

4. Applicant argues Wesinger does not teach “assigning network addresses or units of storage to each virtual host”. The Examiner disagrees. Wesinger teaches running multiple virtual servers on the same physical machine.
5. Applicant argues Wesinger does not teach “determining if a virtual host can access certain storage locations within the physical server.” The Examiner disagrees. Wesinger clearly teaches that in order to access the virtual host/server, which is part of the physical web server, all access rules must be satisfied (3/39-41). Thus, in order to access the physical resources of the web server, of which the virtual host belongs, the request is checked to determine whether access is allowed.
6. For the above reasons, the Examiner maintains the previous rejection to the claims under Wesinger. The Examiner suggests Applicant narrow the claim language to differentiate the claimed invention over the prior art cited.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 6-11, 13-17, 20,23,26-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Wesinger, Jr. et al (US 2001/0011304 A1), hereinafter as Wesinger.

As to claim 6,20,23,26-30:

Art Unit: 2187

8. Wesinger teaches a method and means for creating and maintaining a plurality of virtual servers within a server, the method comprising the steps of:

partitioning resources of the server to establish an instance of each virtual server (multi-homed servers VH1-VHn; 1/9,12; 2/23,26) by allocating units of storage and network addresses of network interfaces of the server to each instance of the virtual server (as defined by the Web server and configuration files, each has own assigned storage resources and address; 1/9,12; 2/23,26), and sharing an operating system and a file system of the server among all of the virtual servers (implementing a physical machine into multiple virtual hosts; 2/23-24);

enabling controlled access to the resources using logical boundary checks and security interpretations of those resources within the server by comparing configuration information of a unit of storage requested by a particular vserver with the resources allocated to that particular vserver (All access rules must be satisfied before access can be gained to access the resources of the host; 3/39-41); and

providing a virtual server context structure including information pertaining to a security domain of the virtual server (rules database in configuration file; 2/23-24, 3/38-41).

As to claim 7:

9. Wesinger teaches the step of providing a vfstore list of the virtual server context structure, the vstore list comprising pointers to vfstore soft objects, each having a pointer that references a path to a unit of storage allocated to the vfiler (configuration file; 2/23-24; 3/38-39).

As to claim 8:

10. Wesinger teaches providing a vfnet list of the virtual server context structure, the vfnet list comprising pointers to vfnet soft objects, each having a pointer that references an interface

Art Unit: 2187

address data structure representing a network address assigned to the virtual server (each virtual host has different IP address; 1/9,12; 2/23,26; 3/39).

As to claim 9-10,15,16:

11. Wesinger teaches performing a virtual server boundary check to verify that a virtual server is allowed to access certain storage resources of the filer (security access check; 4/48-51).

As to claim 11:

12. Wesinger teaches determining whether the virtual server is authorized to access the unit of storage; if the virtual server is not authorized to access the requested unit of storage, immediately denying the request (deny unauthorized request; 4/51); otherwise, allowing the request; and generating file system operations to process the request (process authorized request; 4/52).

As to claim 13,14,17:

13. Wesinger teaches a system adapted to create and maintain a plurality of virtual servers within a server, the system comprising:

a storage media configured to store information as units of storage resources, the units of storage resources allocated among each of the virtual servers ((multi-homed servers VH1-VHn; 1/9,12; 2/23,26);

one or more network interfaces assigned one or more network address resources, the network address resources allocated among each of the virtual servers (each has own assigned storage resources and address; 1/9,12; 2/23);

an operating system having a file system resource adapted to perform a boundary check to verify that a request is allowed to access to certain units of storage resources on the storage

Art Unit: 2187

media, each virtual server allowed shared access to the file system, where the boundary check is performed by comparing configuration information of a unit of storage requested by a particular vserver with the one or more units of storage resources and the one or more network address resources allocated to that particular server (All access rules must be satisfied before access can be gained to access the resources of the host; 3/39-41);

a context data structure provided to each virtual server, the context data structure including information pertaining to a security domain of the virtual server that enforces controlled access to the allocated and shared resources (rules database in configuration file enforcing access control; 2/23-24; 3/38-41); and

a processing element coupled to the network interfaces and storage media, and configured to execute the operating and file systems to thereby invoke network and storage access operations in accordance with results of the boundary check of the file system (physical network resource to perform storage access operations; Fig. 1; 2/23-24; 4/52).

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

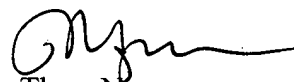
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 571-272-4198. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Than Nguyen
Primary Examiner
Art Unit 2187